

REMARKS/ARGUMENTS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 21-24 and 29-32 are pending in the present application, Claim 21 having been amended, Claims 29-32 having been added, and Claims 14, 16, 17, and 20 having been canceled without prejudice or disclaimer. Applicants respectfully submit that support for new Claims 29-32, and the amendment to Claim 21, is self-evident from the disclosure as originally filed, including Figures 30-33, the originally-filed claims, and pages 115-117 of the specification. In addition, subject matter in Claims 21 and 29-32 is also found in Claim 1 of U.S. Patent No. 6,522,833, which is related to the present application, and U.S. Patent Application Serial No. 10/669,525 (a co-pending sibling application). Applicants respectfully submit that no new matter is added.

In the outstanding Office Action, Claims 14, 16, 17, 20, 21, and 23-24 were rejected under 35 U.S.C. §103(a) as unpatentable over Saeki et al. (U.S. Patent No. 6,263,155) in view of Maeda (U.S. Patent No. 6,072,759).

Applicants respectfully submit that new Claim 29 patentably distinguishes over Saeki and Maeda, taken alone or in proper combination. Claim 29 recites *inter alia*,

...error correction code block address being defined in
units of the error correction code block, and

said object information includes prescribed information
indicating whether an audio gap exists in a specific video object
unit, said audio gap being a portion at which audio reproduction
is discontinued for video playback of that portion.

As recognized by the present inventors, a problem occurs in audio data when video recording is interrupted before a GOP of MPEG-encoded video data comes to an end upon recording corresponding audio data together with MPEG-encoded video data.

In a DVD video recorder that makes video recording while executing MPEG encoding, the user (or video recording timer) sometimes interrupts video recording before a GOP (from a given I-picture to a position immediately before the next I-picture) comes to an end. In such case, audio data recorded parallel to video data is interrupted at the same time.

Upon playing back MPEG-encoded video recorded contents, since an incomplete GOP portion cannot be decoded, a process for completing that GOP by appending correction data to the incomplete GOP is done upon encoding (i.e., ECC).

In this case, since there is no audio data for a portion (less than 0.5 sec if the playback time per GOP is 0.5 sec) corresponding to the playback time of the correction data appended to complete the GOP, sound is interrupted (abnormal sound is produced in some cases) upon video playback of that portion. Assume that this portion is called an audio gap.

In order to cope with sound interrupt (or abnormal sound) due to such audio gap upon playback, the position of this audio gap must be detected.

The position of specific information such as the audio gap can be detected, in a non-limiting embodiment of the claimed invention, by exploiting the contents of the audio synchronization information shown in FIG. 9. The presence of specific information such as the audio gap behind the I-picture in the GOP can be detected based on the most significant bit=0 of 1-byte "I-picture audio position information."

Saeki does not disclose or suggest both the claimed features of ECC block address and audio gap. On the contrary, Saeki merely discloses that each group of 16 sectors is given an ECC block.¹

Furthermore, Maeda does not cure the above-noted deficiency in Saeki. Maeda merely discloses that ECC is added to each unit composed of 16 data sectors.²

¹ Saeki, col. 6, lines 59-63. See also, Fig. 4.

² Maeda, col. 18, lines 40-46.

Thus, the combination of Saeki and Maeda do not disclose or suggest the claimed features of ECC and audio gap.

Accordingly, Applicants respectfully submit that new Claim 29 patentably distinguishes over Saeki and Maeda, taken alone or in proper combination. Claims 30-32 recite elements similar to those of Claim 29. Thus, Applicants respectfully submit that Claims 30-32 patentably distinguishes over Saeki and Maeda, taken alone or in proper combination, for at least the reasons stated for Claim 29.

With respect to the rejection of Claim 21 as unpatentable over Saeki and Meada, Applicants respectfully submit that amended Claim 21 patentably distinguishes over Saeki and Meada, taken alone or in proper combination.

Amended Claim 21 recites, *inter alia*

...said data area is configured to record the data object with ECC blocks...

...said video object information includes prescribed information indicating whether an audio gap exists in a specific video object unit, said audio gap being a portion at which audio reproduction is discontinued for video playback of that portion....

As characterized above, Saeki and Maeda, taken alone or in proper combination, do not disclose or suggest at least the above-noted features of amended Claim 21.

Thus, Applicants respectfully submit that Claim 21 (and Claims 23 ad 24 dependent thereon) patentably distinguish over Saeki and Maeda, taken alone or in proper combination.

Application No. 10/669,525
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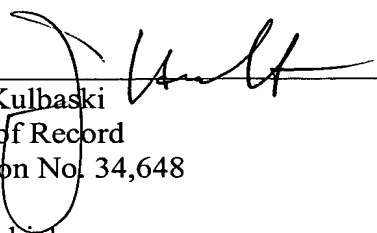
Consequently, in light of the above discussion and in view of the present amendment, the present application is believed to be in condition for allowance and an early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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